surrounding each storm drain and sanitary sewer pipe and the overburden designation was applied to the remaining excavated soil. Excavated peripheral material often included small sections of crumbled pipe and crushed manhole pieces that were processed along with the surrounding soil in RSY1. In total, 2,367 truckloads (approximately 28,404 cubic yards) of peripheral material were excavated from Parcel B and transferred to RSY1 for radiological processing. In addition, 2,974 truckloads (about 35,688 cubic yards) of overburden soils were excavated from Parcel B and transferred to either RSY1 or RSY2 for processing. Table 3-3 identifies each truckload of peripheral material excavated from Parcel B, its assigned screening pad in RSY1, and its unique survey unit identification number. Table 3-4 summarizes each truckload of overburden soil excavated from Parcel B, the associated screening pad and assigned survey unit number, and the date the soil was excavated.

3.1.2.2 Excavated Soils

The DON and the RASO concurred with modifying the procedure for excavating and segregating peripheral material and overburden soil in 2007. This modified procedure was documented in revisions to the Work Plan (TtEC 2007a; 2008c; 2008d; 2010b) and was applied to the storm drain and sanitary sewer lines associated with the Parcel B radiologically impacted buildings or former building sites and those storm drain and sanitary sewer lines located outside the original Work Areas 1 through 11 boundaries. Peripheral and overburden soil removed from these trenches was not segregated. Excavated soil from these trenches was transferred to either RSY2 or RSY4 and placed on screening pads for radiological processing. Each screening pad with soil derived from excavation of the Parcel B storm drain and sanitary sewer lines was assigned a unique excavated soil survey unit (ES) number. In total, 91 truckloads (approximately 1,092 cubic yards) of excavated soil associated with storm drain and sanitary sewer trenches were removed from Parcel B and transferred to RSY2 or RSY4 for radiological processing. Table 3-4 summarizes each truckload of excavated soil, the associated screening pad and unique ES number, and the date the soil was excavated.

3.1.3 Radiological Screening Yard Processing

Peripheral material, overburden, and excavated soils were radiologically processed in one of the screening yards specifically constructed for this purpose. Overburden and excavated soils removed from the Parcel B storm drain and sanitary sewer line trenches were radiologically processed in the same manner, regardless of whether the material was transferred to RSY1, RSY2, or RSY4.

3.1.3.1 Peripheral Material Radiological Processing

In general, each truckload of excavated peripheral material was transferred to RSY1 and placed on a 14-cubic-yard screening pad. On the screening pad, the peripheral material was assigned a

unique survey unit identification number and spread to a maximum thickness of 6 inches where it was allowed to dewater. Some truckloads of peripheral material derived from IR Program sites were placed on the larger overburden screening pads when no 14-cubic-yard screening pads were available. Each prepared peripheral material survey unit was 100 percent radiologically scanned by a trained technician using a Ludlum 2350-1 instrument equipped with a 44-10 probe. Once scanned, two soil samples were collected from each survey unit at the locations of the highest scan readings and submitted under chain-of-custody to the laboratory for analysis by gamma spectroscopy. In addition, 10 percent of the peripheral material samples were analyzed for Sr-90.

During the Parcel B TCRA, a total of 2,369 peripheral material survey units were radiologically processed in RSY1. Following the completion of radiological processing, 2,156 peripheral material survey units were consolidated onto appropriate 1,000 m^2 screening pads in RSY1 for further processing. A total of 59 peripheral material survey units indicated the presence of radioactive contamination and were placed in low-level radioactive waste (LLRW) bins for disposal by the DON radiological waste contractor. In addition, a total of 59 radiologically surveyed and released peripheral material survey units were segregated for disposal by the DON non-LLRW contractor due to the presence of staining and/or odor. Table 3-3 lists each truckload of peripheral material excavated from the Parcel B storm drains and sanitary sewers, identifies the assigned screening pad and unique survey unit identification number, includes the date of excavation, and provides the subsequent disposition of the material following processing.

3.1.3.2 Overburden and Excavated Soil Radiological Processing

A total of 268 screening pads containing overburden or excavated soils derived from the Parcel B storm drain and sanitary sewer trenches were processed in the RSYs during the removal action. Table 3-5 summarizes the overburden soil radiologically processed in RSY1 and Table 3-6 summarizes the excavated soil processed in RSY2 and RSY4. Tables 3-5 and 3-6 identify the unique overburden survey unit or ES number and associated screening pad, IR Program site (if present), date on which the final gamma scan was performed, number of soil samples collected, identified ROCs and analytical results when contamination was present, the volume of contaminated soil remediated, and final disposition of the processed soil.

Prior to radiological processing in the RSYs, the excavated material from Parcel B was spread on 1,000 m^2 screening pads in lifts that did not exceed a thickness of 6 inches. Radiological surface scans were conducted for each screening pad of excavated material. These high-density gamma scans were performed with the use of gamma scintillation detectors supported by GPS equipment. A discussion of the various towed array systems used for scanning is provided in the Work Plan (TtEC 2010b) and the SUPRA (Appendix A). This survey process resulted in a 100 percent surface scan. Radioactive materials identified during the screening activities were